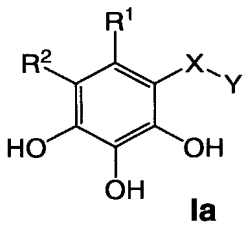
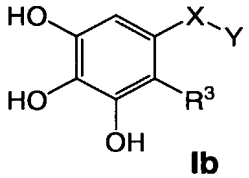
Claims

1. Pharmaceutical compositions comprising at least one compound of the formulas (Ia) or (Ib) and a pharmaceutically acceptable carrier which is useful in a medicine.



Ia



Ib

wherein the symbols, indices and substituents have the following meaning

R^1=H, CN, NO_2, CF_3, F, Cl, Br, I, CH_3

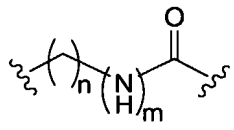
R^2=H, CN, NO_2, CF_3, F, Cl, Br, I, CH_3, Et, n-Pr, i-Pr, n-Bu, t-Bu, phenyl, thienyl, furyl, thiazolyl and

either R^1 or R^2 must be H

R^3=H, CN, NO_2, CF_3, F, Cl, Br, I, CH_3, Et, n-Pr, i-Pr, n-Bu, t-Bu, phenyl, thienyl, furyl, thiazolyl

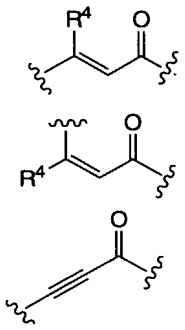
-X- =

(a)



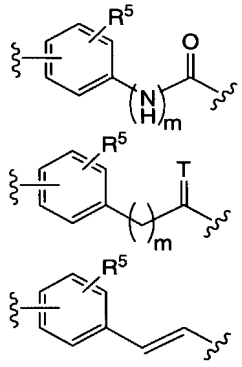
with m = 0,1; n = an integer from 1 to 6

(b)

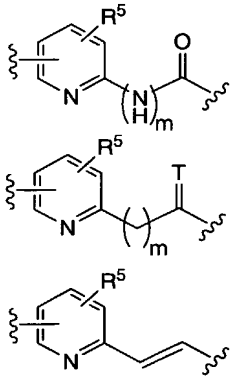


with R^4 being H, CH_3, CH_2CH_3

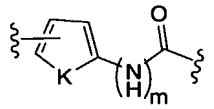
c)

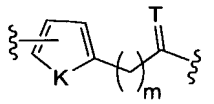


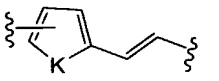
(*E* or *Z* double bond)



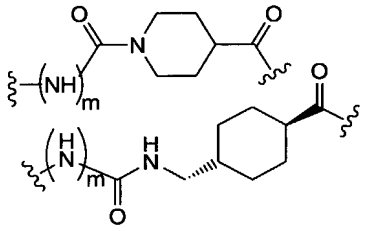
(*E* or *Z* double bond)







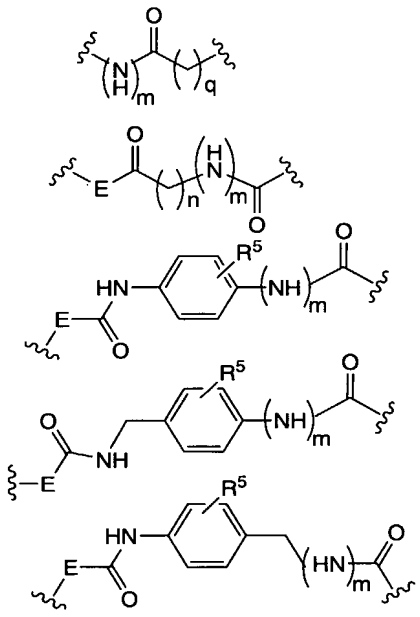
(*E* or *Z* double bond)



with R^5 being H, NO_2, CF_3, F, Cl, Br, I, CN, CH_3, NH_2, NHAlkyl, NHAryl, NHAcyl and -K- being -S- or -O-

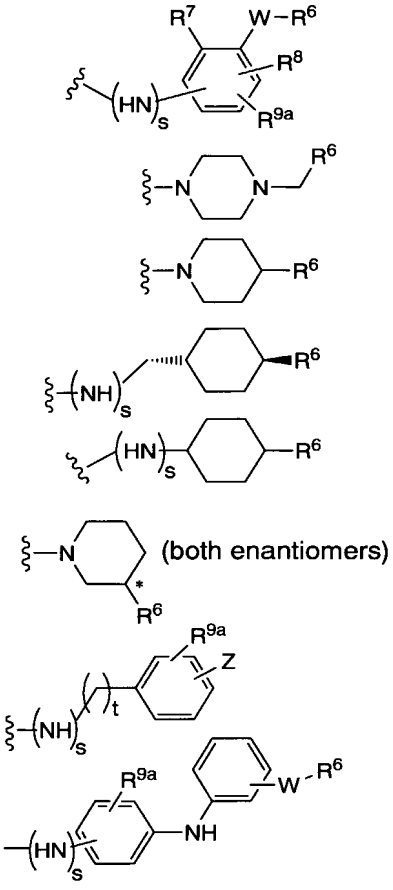
and T being O, S or [H,H]

(d)



with -E- being -$(CH_2-)_kNH$- and k=0, 1, 2, 3 and with q being an integer from 1 to 6

- Y =



with s being 0 or 1,

R^6 being CO_2H, CO_2Alkyl, CO_2Aryl, CO_2NH_2, $CO_2Aralkyl$, SO_3H, SO_2NH_2, $PO(OH)_2$, 1-H-tetrazolyl-, CHO, $COCH_3$, CH_2OH, NH_2, NHAlkyl, N(Alkyl)Alkyl', OCH_3, CH_2OCH_3, SH, F, Cl, Br, I, CH_3, CH_2CH_3, CN, CF_3

R^7 independently from R^6 being H, CH_3, CH_2CH_3, CF_3, F, Cl, Br, I, CN, NO_2 and

R^8 independently from R^6 and R^7 being H, CH_3, CH_2CH_3, CF_3, F, Cl, Br, I, CN, NO_2, R^6

R^{9a} being H, NO_2, CF_3, F, Cl. Br, I, CN, CH_3, OCH_3, SH, NH_2

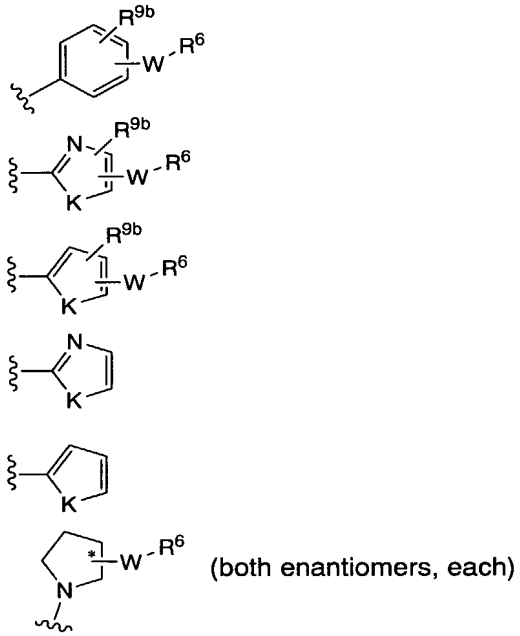
t being 0,1,2

and -W- = -$(CH_2-)_v$, *cis*-CH=CH- or *trans*-CH=CH-, and v being 0,1,2;

in case that $R^6 = NH_2$ R^7 or R^8 or R^{9a} must not be H;

in case that -W- is *cis*-CH=CH- or *trans*-CH=CH-, R^6 must not be NH_2 or SH;

-Z =

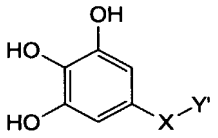


-W-R^6

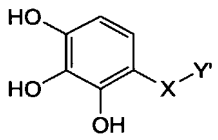
R^{9b} independently from R^{9a} being H, NO_2, CF_3, F, Cl. Br, I, CN, CH_3, OCH_3, SH, NH_2,

or the pharmaceutically acceptable salts, esters or amides and prodrugs of the above identified compounds of formulas (Ia) or (Ib).

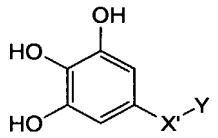
2. Pharmaceutical compositions according to claim 1, wherein the compounds are defined by formulas (A1), (B1), (A2) or (B2)



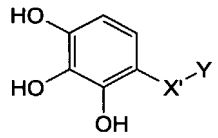
A1



B1

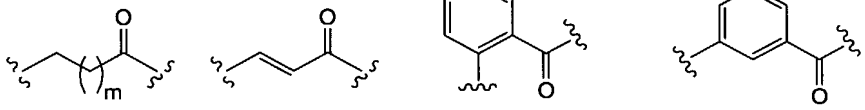


A2

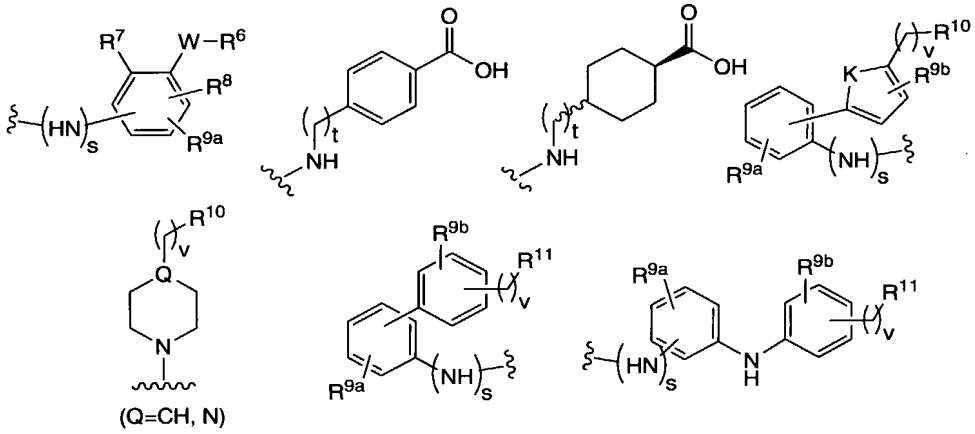


B2

wherein -X- and -Y are like defined above and wherein -X'- is



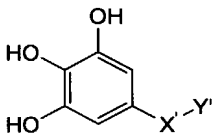
and wherein -Y' is



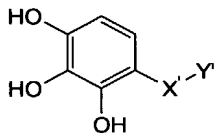
with R^{10} being CO_2H, CO_2alkyl, CO_2aryl, CO_2NH_2, CO_2aralkyl, CH_2SO_3H, $CH_2SO_2NH_2$, $CH_2PO(OH)_2$, 1-H-tetrazolyl, CHO, $COCH_3$, CH_2OH, CH_2NH_2, CH_2NHalkyl, CH_2N(alkyl)alkyl', CH_2OCH_3, CH_2SH,

R^{11} being CO_2H, CO_2alkyl, CO_2aryl, CO_2NH_2, CO_2aralkyl, SO_3H, SO_2NH_2, $PO(OH)_2$, 1-H-tetrazolyl, CHO, $COCH_3$, OH, NH_2, NHalkyl, N(alkyl)alkyl', OCH_3, SH

3. Pharmaceutical compositions according to claim 1, wherein the compounds are defined by formulas (C) or (D)



C



D

wherein -X'- and -Y' are defined like in claim 2.

4. Pharmaceutical compositions according to claim 2 and/or 3, comprising at least one compound of formula (A1), (A2), (B1), (B2), (C) or (D).

5. Compounds according to claim 3 having the general structure of formula (C).

6. Compounds according to claim 3 having the general structure of formula (D).

7. Method of inhibiting the binding of P-selectin, L-selectin or E-selectin to sLe^x or sLe^a and tyrosinesulfate residues comprising the step of administering to a patient an effective amount of at least one compound having the structure of formulas (Ia) or (Ib) as defined in claim 1.

8. Use of compounds having the structure of formulas (Ia) or (Ib) as defined in claim 1 for the preparation of a medicine for the treatment of a patient, inhibiting the binding of P-selectin, L-selectin or E-selectin to sLe^x or sLe^a and tyrosinesulfate residues.

9. Use of compounds having the structure of formulas (Ia) or (Ib) as defined in claim 1 for the preparation of a medicine for the treatment, diagnosis or prophylaxis of

inflammatory disorders and other medical conditions where selectin mediated processes play a role.

10. Use of compounds having the structure of formulas (Ia) or (Ib) as defined in claim 1 for the preparation of a vehicle for drug targeting of diagnostics or therapeutics.